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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/915,703	07/26/2001	Byeung-Joon Ahn	P/2292-46	9357

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NEW YORK, NY 100368403

EXAMINER

CIRIC, LJILJANA V

ART UNIT	PAPER NUMBER
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3743

DATE MAILED: 01/29/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.
09/915,703

Applicant(s)

Ahn

Examiner

Ljiljana V. Ciric

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Nov 4, 2002.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above, claim(s) 6-12 and 17-19 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5, 13-16, and 20-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on Jul 26, 2001 is/are a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
*See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____ 6) ☐ Other: _____

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DETAILED ACTION

Election/Restriction

1. Applicant's election without traverse of the species corresponding to the process of Figure 6C (readable on claims 1 through 5, 13 through 16, and 20 through 22) in Paper No. 4 is acknowledged. Contrary to applicant's assertions, claim 17 is not readable on the elected species, being instead readable on the species corresponding to Figures 7a and 7b [see page 12, lines 6-13]. Claim 22, although not listed by applicant, *is* readable on the elected species.
2. Claims 6 through 12, and 17 through 19 are hereby withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to the various non-elected species, there being no allowable generic or linking claim. Election was made without traverse in Paper No. 4.

Priority

3. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Specification

4. The abstract of the disclosure is objected to because it contains idiomatic and grammatical informalities. Correction is required. See MPEP § 608.01(b).
5. The disclosure is objected to because of the following informalities, for example: "in stead" [page 2, line 6] should be replaced with "instead"; and, "Ag" [page 2, line 11] should be replaced with "silver" for improved readability.

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Appropriate correction is required.

6. A substitute specification in proper idiomatic English and in compliance with 37 CFR 1.52(a) and (b) is required. The substitute specification filed must be accompanied by a statement that it contains no new matter.

Claim Objections

7. Claims 1 through 5, 13 through 16, and 20 through 22 are objected to because of the following informalities, for example: "a" should be inserted immediately preceding "thermoplastic" [claim 1, line 4; claim 22, line 4]; "a" should be inserted immediately preceding "metal alloy" [claim 3, line 2]; "a dipping, a plating, or a sputtering" [claim 4, line 2] should be replaced with "dipping, plating, or sputtering"; "said" or "the" should be inserted immediately preceding "coil pattern" [claim 5, line 1]; "so as to have a certain length" [claim 20, lines 2-3] should be replaced with "to a certain length"; and, "an outward electrode on both ends" [claim 21, line 3] should be replaced with "an external electrode on each end". Appropriate correction is required.

Claim Rejections - 35 U.S.C. § 112

8. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
9. Claims 1 through 5, 13 through 16, 20, and 21 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

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The claims are generally narrative and indefinite, failing to conform with current U.S. practice. They appear to be a literal translation into English from a foreign document and contain grammatical and idiomatic errors, as well as other inconsistencies as pointed out more specifically below.

For example, the limitations “transforming the cylindrical body into a square-shaped body by inserting *the cylindrical body formed the coil pattern* into a square-shaped mold” appear to have a word or words missing and are thus not readily comprehensible as written.

There is insufficient antecedent basis for the following limitations in the claims: “the coil pattern forming process” [claim 2, line 1]--if this set of limitations refers to the coil pattern forming recited in 5 of claim 1 from which claim 2 depends, recommend replacing the same with “said coil pattern forming” or similar, as appropriate, for improved clarity and consistency; and, “the section of the square-shaped mold” [claim 15, lines 1-2].

The limitation “including at least one of them” as well as the alternative language appearing in claim 3 are not clear as written and should be replaced with the recitation of a corresponding Markush grouping, as appropriate.

The limitations “wherein the organic binder is a material vanished in a sintering process of the cylindrical body” are not clear as appearing in claim 13, rendering the claim indefinite with regard to the scope of protection sought. Do these limitations positively recite a sintering process which removes the organic material or are they merely negative limitations removing the previous

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recitation of the organic binder? If the latter, then why is the composition of a "vanished" or non-existent material being recited in claim 14 which depends from claim 13?

Claim 14 as written is further rendered indefinite by the combination of alternative and negative language appearing therein.

The above is an indicative, but not necessarily an exhaustive, list of 35 U.S.C. 112, second paragraph, problems. Applicant is therefore advised to carefully review all of the claims for additional problems. Correction is required of all of the 35 U.S.C. 112, second paragraph problems, whether or not these were particularly pointed out above.

Claim Rejections - 35 U.S.C. § 102

10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

11. As best can be understood in view of the indefiniteness of the claims, claims 1, 13 through 16, and 20 through 22 are rejected under 35 U.S.C. 102(b) as being anticipated by *Takayama et al.*

Takayama et al. [especially see Figures 1B, 1C or 3A, 3B in combination with Figure 2] discloses a method of manufacturing a chip inductor essentially as claimed, including forming a cylindrical body having a diameter of 0.5 - 10 mm by mixing a ferrite and a thermoplastic organic binder, forming a coil pattern on the surface of the cylindrical body by winding a conducting

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wire 10 around the cylindrical body 8, transforming the cylindrical body 8 into a square-shaped body 13 by inserting the cylindrical body 8 into an extruder or "mold" 11, forming an exterior coating layer 12 on the cylindrical body 8 after forming the spiral coil pattern on the surface of the cylindrical body 8, cutting the transformed body 13 to a particular length, sintering the transformed body 13, and forming external electrodes 3 on each end of the sintered body.

The reference thus reads on the claims.

12. Applicant cannot rely upon the foreign priority papers to overcome this rejection because a translation of said papers has not been made of record in accordance with 37 CFR 1.55. See MPEP § 201.15.

Claim Rejections - 35 U.S.C. § 103

13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

14. As best can be understood in view of the indefiniteness of the claims, claims 2 through 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Takayama et al.* in view of *Harada et al.*

As discussed in greater detail above, *Takayama et al.* discloses a method for manufacturing a chip inductor essentially as claimed. While *Takayama et al.* discloses forming a

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coil pattern on the surface of the of the cylindrical body 8 by winding a conducting wire 10 in a spiral shape around the cylindrical body 8, *Takayama et al.* does not specify the coil pattern forming step as comprising the steps of forming a metal layer on the surface of the cylindrical body 8 and forming a coil pattern as a spiral shape on the metal layer instead of forming the coil pattern simply by winding a conducting wire 10 around the cylindrical body 8. Nevertheless, it is known in the art and taught by *Harada et al.* [especially Figures 25(a) through 25(d)] to form a coil pattern along the middle section of a semiconductor chip by first forming a nickel-alloy conductive metal layer 3 around the chip by using sputtering or plating (i.e., thick-film forming) and then by forming a spiral coil pattern 3a in the metal layer 3 using a laser process [see column 3, lines 65-67; column 4, lines 1-17] in order to fine-tune the resistance value of the chip.

It would thus have been obvious to one skilled in the art at the time of invention to modify the method of manufacturing disclosed by *Takayama et al.* by forming the conductive coil pattern on the chip by forming a coil pattern in a metallic layer formed on the chip in order to facilitate fine-tuning the resistance value of the chip, thus enhancing eventual chip performance.

15. Applicant cannot rely upon the foreign priority papers to overcome this rejection because a translation of said papers has not been made of record in accordance with 37 CFR 1.55. See MPEP § 201.15.

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Conclusion

16. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. *Satou et al.*, *Amada et al.*, *Aoba et al.*, *Takayama et al.*, *Ogawa et al.*, *Kanetaka et al.* and *Siemens Matsushita Components GmbH & Co KG* each disclose methods of making chip inductors having a solid core with a coil pattern thereon.

17. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ljiljana (Lil) V. Ciric, whose telephone number is (703) 308-3925. While she works a flexible schedule that varies from day to day and from week to week, Examiner Ciric may generally be reached at the Office during the work week between the hours of 10 a.m. and 6 p.m. ET.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Henry Bennett, can be reached on (703) 308-0101. The fax phone number is (703) 305-3463.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703)-308-0861.

lvc

January 26, 2003



LJILJANA V. CIRIC
PRIMARY EXAMINER
ART UNIT 3743